

## Certification Summary Information Report

<b>Manufacturer</b>	Yamaha Motor Corporation	<b>Manufacturer Code</b>	YMX
<b>Engine Family</b>	KYMXC.998GEJ	<b>Model Year</b>	2019
<b>Certificate Number</b>	KYMXC.998GEJ-018	<b>Certificate Issue Date</b>	09/27/2018
<b>Certificate Effective Date</b>	09/27/2018	<b>Certificate Revision Date</b>	09/24/2018
<b>General Information</b>			
<b>Vehicle Category</b>	Highway Motorcycle - III(>-279cc)	<b>Sales Areas of All Vehicles/Engines in This Engine Family</b>	Some 49, Some California
<b>Small Volume Manufacturer Recognition</b>	Regular Volume	<b>Are you Certifying This Vehicle/Engine By Design</b>	No
<b>Manufacturer Code assigned by CARB</b>	YAMA	<b>Parent Company Name</b>	--
<b>EPA Certification Fee Paid Date</b>	07/31/2018	<b>Application Type</b>	Carry-Over
<b>Engine Family name that previously certified</b>	JYMXC.998GEJ		
<b>Permeation Family Name</b>	KYMXPMETALF5	<b>Does this Perm Family participate in Average Banking and Trading?</b>	No
<b>Does this EF participate in an EPA and/or CARB emission averaging program?</b>	Yes	<b>Does this EF participate in EPA and/or CARB emission averaging program?</b>	Both
<b>Testing procedure applied for exhaust emissions values</b>	40CFR86, Subpart E: Chassis test	<b>If Other, Please provide EPA/CARB approval ID for this testing procedure</b>	--
<b>Are you the original manufacturer of the certifying vehicle/engine?</b>	Yes		
<b>Vehicle Original Equipment Manufacturer</b>	<b>Country where the Vehicles were assembled</b>	<b>Engine Original Equipment Manufacturer</b>	<b>Country where the Engines were assembled</b>
YAMAHA MOTOR CO., LTD.	JAPAN	YAMAHA MOTOR CO., LTD.	JAPAN
<b>Manufacturer Comments</b>	--		

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<b>Engine Family</b>	KYMXC.998GEJ	<b>Model Year</b>	2019
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**EPA Emission Standards and Certification Levels**

EPA Exhaust Emissions units:G/KM				
<b>Air Pollutant</b>	<b>HC</b>	<b>NOx</b>	<b>HC+NOx</b>	<b>CO</b>
Certification Level			0.3	0.4
Family Emission Limit			0.5	
Emission Standards				12.0
Applicant Notes				

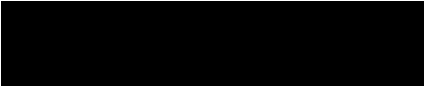


  
**CARB Emission Standards and Certification Levels**

CARB HMC Early Compliance Multiplier: 0					Evaporative Emissions (HMC CARB-only) Diurnal + Hot Soak Evaporative Emissions (Unit: g/test):	
<b>Air Pollutant</b>	<b>THC</b>	<b>NOx</b>	<b>THC+NOx</b>	<b>CO</b>	KYMxu0016YDA	
Certification Level	0.16	0.10	0.26	0.4	0.1	
Family Emission Limit			0.5			
Emission Standards			0.8	12	2.0	
Emission Useful Life (UL) as applicable	UL (years):5		UL (km):30000		UL (years):5	UL (km):30000
Applicant Notes:	--					

  
**Engine Family Description**

<b>Engine Family Useful Life</b>	EPA Required Useful Life		
<b>EF Fuel System Type</b>	Single Fuel System		
	<b>Primary Operating Fuel Type</b>	<b>Fuel Type, If Other</b>	
	Gasoline	--	
<b>Combustion Cycle</b>	4-Stroke		
<b>Combustion Cycle, If Other</b>			
<b>Cylinder Arrangement</b>	In Line		
<b>Cylinder Arrangement, If Other</b>			
<b>Number of Cylinders</b>	4	<b>Valves per Cylinder</b>	4
<b>Engine Type</b>	Reciprocating (otto cycle)		
<b>Engine Type, If Other</b>			
<b>Engine Cooling Media</b>	Liquid Cooled		
<b>Engine Cooling Media, If Other</b>			
<b>Does this engine family contain multiple displacements?</b>	No	<b>New Technology</b>	No
<b>Technology explanation</b>	--		
<b>Applicant Notes</b>			

## Certification Summary Information Report

<b>Engine Family</b>	KYMXC.998GEJ	<b>Model Year</b>	2019
<b>Exhaust Emission Control Information</b>			
<b>ECS Reference Number</b>	1	<b>Is this engine family equipped with a catalytic converter?</b>	Yes
<b>Total number of catalytic converters</b>	1	<b>Applicable catalytic converter configuration</b>	Single
<b>Catalytic converter type used</b>	Three Way Catalyst (TWC), single-bed, closed-loop warm up		
<b>Catalyst Manufacturer Name</b>			
<b>Catalyst Manufacturer Location</b>			
<b>Does the engine family use an Exhaust Gas Recirculation (EGR) technology as part of the Emission Control System?</b>	No	<b>Description of the EGR technology used</b>	--
<b>Applicable engine fuel system type</b>	Sequential Multiport FI		
<b>If Other, Enter a description of the fuel system</b>			
<b>Method of air aspiration for the engine</b>	Naturally Aspirated		
<b>Method of engine aspiration, If Other</b>			
<b>Charge Air Cooler Type</b>	No Air Cooler		
<b>Electronic engine control module type</b>	Engine Control Module		
<b>Applicable method of air injection methodology</b>	Pulse Secondary Air Injection		
<b>Air injection methodology, If Other</b>			
<b>Air/fuel feedback sensor used on this engine family</b>	Yes		
<b>Sensor Type</b>	Oxygen Sensors		
<b>Sensor Type, If Other</b>			
<b>Number of feedback sensor(s) used</b>	2		
<b>Configuration of the feedback sensors arrangement</b>	Series		
<b>Applicant Notes</b>			

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## Certification Summary Information Report

Engine Family		KYMXC.998GEJ		Model Year		2019	
Federal Mandatory Greenhouse Gas (GHG) Reporting							
GHG Name	GHG Value	Unit of GHG Value	Measured/Estimated at Distance (km)	By Method	Test Vehicle ID	Reference/Citations	Test/Estimation Date
CH4	0.017	Grams Per Kilometer	--	Derived results based on EPA GHG default factor	--	40 CFR 86.431-78	N/A
CO2	156.2	Grams Per Kilometer	3517	Tested result from the EDV(s) of the Engine Family	JYARN39Y9FA000001	40 CFR 86.431-78	08/06/2014
N2O	0.007	Grams Per Kilometer	--	Derived results based on EPA GHG default factor	--	40 CFR 86.431-78	N/A
Applicant notes for GHG data							

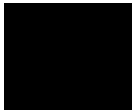

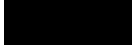

## Certification Summary Information Report

Engine Family	KYMXC.998GEJ	Model Year	2019
<b>EPA - ONLY Permeation Emissions Control/Test Data</b>			
<b>Fuel Tank Permeation Emissions Details</b>			
<b>Fuel Tank #1</b>			
Permeation Family Name	KYMXPMETALF5	Certification Level (g/m2/day)	0.77
Emission Standard (g/m2/day)	1.5	Family Emission Limit (g/m2/day)	--
Certification Method	Emission tests	Fuel Tank Manufacturer	YAMAHA MOTOR CO.LTD.
<b>Other</b>			
Use Carry-over Test Data?	Yes	If carryover, from Permeation Family	JYMXPMETALF5
Carryover DF	No	If carryover, from DF Permeation Family	--
Tank Material	Metal		
Tank Material if Other			
Control Strategy	Inherently Low/Zero Permeation Material		
Least Thickness (mm)	1	Least Barrier Weight (%)	--
Least Barrier Mol (%)	--	Least Barrier Thickness (mm)	--
Production Method	Other Production Method		
Production Method if Other			
Press			
Test Data (g/m2/day)	0.77	DF (g/m2/day)	0.0
EPA Certificate Number	--		
<b>Fuel Line Permeation Emissions Details</b>			
<b>Fuel Line #1</b>			
Certification Level (g/m2/day)	11.1	Emission Standard (g/m2/day)	15.0
Permeation Emissions Certification Method	Emission tests	Fuel Line Manufacturer	KOKOKU INTECH CO.LTD
Certified By Design LINE	--		
<b>Other</b>			
Use Carry-over Test Data?	Yes	If carryover, from Permeation Family	JYMXPMETALF5
Carryover DF	No	If carryover, from DF Permeation Family	--
Fuel Line Material	Other		
Fuel Line Material			
FKM/ECO			
Least Thickness (mm)	2	Test Results (g/m2/day)	11.14
DF (g/m2/day)	--	EPA Certificate Number	--
<b>Fuel Line #2</b>			
Certification Level (g/m2/day)	10.9	Emission Standard (g/m2/day)	15.0
Permeation Emissions Certification Method	Emission tests	Fuel Line Manufacturer	MEIJI FLOW SYSTEMS
Certified By Design LINE	--		

**Certification Summary Information Report**

<b>Engine Family</b>	KYMXC.998GEJ	<b>Model Year</b>	2019
<b>Other</b>			
<b>Use Carry-over Test Data?</b>	Yes	<b>If carryover, from Permeation Family</b>	JYMXPMETALF5
<b>Carryover DF</b>	No	<b>If carryover, from DF Permeation Family</b>	--
<b>Fuel Line Material</b>	Other		
<b>Fuel Line Material</b>			
PA11			
<b>Least Thickness (mm)</b>	1	<b>Test Results (g/m2/day)</b>	10.87
<b>DF (g/m2/day)</b>	--	<b>EPA Certificate Number</b>	--
<b>Comments</b>			
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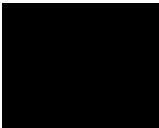

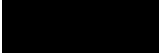
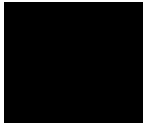


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<b>Engine Family</b>	KYMXC.998GEJ	<b>Model Year</b>	2019
<b>Models Covered</b>			
<b>Model #1</b>			
<b>Reference Model Number</b>	1	<b>Final Assembly Manufacturer Name</b>	Yamaha Motor Co., Ltd.
<b>Manufacturer Model Name</b>	YZF-R1	<b>Commercial / Advertised Model Name</b>	YZFR1K1L (YZF-R1)
<b>Engine Code</b>	N527	<b>Vehicle Category</b>	HMC:Class III
<b>Evaporative Family (CARB)</b>	--	<b>Number of Evaporative Canisters (CARB)</b>	1
<b>Displacement (cc)</b>	998	<b>Bore (mm)</b>	79.0
<b>Stroke (mm)</b>	50.9	<b>Basic Ignition Timing (degrees, BTDC)</b>	5
<b>Rated Power (kW)</b>	139.7	<b>RPM @ Rated Power</b>	12000
<b>Rated Torque (nt-m)</b>	112.4	<b>RPM @ Rated Torque</b>	11500
<b>N/V Ratio</b>	45.1	<b>Curb Mass (kg)</b>	205
<b>Equivalent Inertial Mass (kg)</b>	280	<b>Loaded Vehicle Mass (kg):</b>	285
<b>Transmission (e.g. M5, A3, etc.)</b>	M6		
<b>Vehicle Emission Compliance Information (VECI) Label Type</b>			
49-state Sales w/ 49-state Label			
<b>Fuel System</b>			
<b>Emission Control System (model / rating specific)</b>	1	<b>Projected Sales (CBI) - CA Only</b>	
<b>Projected Sales (CBI) - US Total (includes CA Sales)</b>		<b>Projected Sales (CBI) - US (49-States)</b>	
<b>Mfr Previously Exempted?</b>	--		
<b>Permeation Family Name (s)</b>	KYMXPMETALF5		
<b>Applicant Notes</b>			
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<b>Model #2</b>			
<b>Reference Model Number</b>	2	<b>Final Assembly Manufacturer Name</b>	Yamaha Motor Co., Ltd.
<b>Manufacturer Model Name</b>	YZF-R1	<b>Commercial / Advertised Model Name</b>	YZFR1K1R (YZF-R1)
<b>Engine Code</b>	N527	<b>Vehicle Category</b>	HMC:Class III
<b>Evaporative Family (CARB)</b>	--	<b>Number of Evaporative Canisters (CARB)</b>	1
<b>Displacement (cc)</b>	998	<b>Bore (mm)</b>	79.0
<b>Stroke (mm)</b>	50.9	<b>Basic Ignition Timing (degrees, BTDC)</b>	5
<b>Rated Power (kW)</b>	139.7	<b>RPM @ Rated Power</b>	12000
<b>Rated Torque (nt-m)</b>	112.4	<b>RPM @ Rated Torque</b>	11500
<b>N/V Ratio</b>	45.1	<b>Curb Mass (kg)</b>	205
<b>Equivalent Inertial Mass (kg)</b>	280	<b>Loaded Vehicle Mass (kg):</b>	285
<b>Transmission (e.g. M5, A3, etc.)</b>	M6		
<b>Vehicle Emission Compliance Information (VECI) Label Type</b>			
49-state Sales w/ 49-state Label			
<b>Fuel System</b>			
<b>Emission Control System (model / rating specific)</b>	1	<b>Projected Sales (CBI) - CA Only</b>	

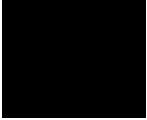


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<b>Engine Family</b>	KYMXC.998GEJ	<b>Model Year</b>	2019
<b>Projected Sales (CBI) - US Total (includes CA Sales)</b>		<b>Projected Sales (CBI) - US (49-States)</b>	
<b>Mfr Previously Exempted?</b>	--		
<b>Permeation Family Name (s)</b>	KYMXPMETALF5		
<b>Applicant Notes</b>			
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<b>Model #3</b>			
<b>Reference Model Number</b>	3	<b>Final Assembly Manufacturer Name</b>	Yamaha Motor Co., Ltd.
<b>Manufacturer Model Name</b>	YZF-R1C	<b>Commercial / Advertised Model Name</b>	YZFR1K1CL (YZF-R1 Cal model)
<b>Engine Code</b>	N527	<b>Vehicle Category</b>	HMC:Class III
<b>Evaporative Family (CARB)</b>	KYMXU0016YDA	<b>Number of Evaporative Canisters (CARB)</b>	1
<b>Displacement (cc)</b>	998	<b>Bore (mm)</b>	79.0
<b>Stroke (mm)</b>	50.9	<b>Basic Ignition Timing (degrees, BTDC)</b>	5
<b>Rated Power (kW)</b>	139.7	<b>RPM @ Rated Power</b>	12000
<b>Rated Torque (nt-m)</b>	112.4	<b>RPM @ Rated Torque</b>	11500
<b>N/V Ratio</b>	45.1	<b>Curb Mass (kg)</b>	205
<b>Equivalent Inertial Mass (kg)</b>	280	<b>Loaded Vehicle Mass (kg):</b>	285
<b>Transmission (e.g. M5, A3, etc.)</b>	M6		
<b>Vehicle Emission Compliance Information (VECI) Label Type</b>	California Sales w/ California Label		
<b>Fuel System</b>			
<b>Emission Control System (model / rating specific)</b>	1	<b>Projected Sales (CBI) - CA Only</b>	
<b>Projected Sales (CBI) - US Total (includes CA Sales)</b>		<b>Projected Sales (CBI) - US (49-States)</b>	
<b>Mfr Previously Exempted?</b>	--		
<b>Permeation Family Name (s)</b>	KYMXPMETALF5		
<b>Applicant Notes</b>			
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<b>Model #4</b>			
<b>Reference Model Number</b>	4	<b>Final Assembly Manufacturer Name</b>	Yamaha Motor Co., Ltd.
<b>Manufacturer Model Name</b>	YZF-R1C	<b>Commercial / Advertised Model Name</b>	YZFR1K1CR (YZF-R1 Cal model)
<b>Engine Code</b>	N527	<b>Vehicle Category</b>	HMC:Class III
<b>Evaporative Family (CARB)</b>	KYMXU0016YDA	<b>Number of Evaporative Canisters (CARB)</b>	1
<b>Displacement (cc)</b>	998	<b>Bore (mm)</b>	79.0
<b>Stroke (mm)</b>	50.9	<b>Basic Ignition Timing (degrees, BTDC)</b>	5
<b>Rated Power (kW)</b>	139.7	<b>RPM @ Rated Power</b>	12000
<b>Rated Torque (nt-m)</b>	112.4	<b>RPM @ Rated Torque</b>	11500
<b>N/V Ratio</b>	45.1	<b>Curb Mass (kg)</b>	205
<b>Equivalent Inertial Mass (kg)</b>	280	<b>Loaded Vehicle Mass (kg):</b>	285

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<b>Engine Family</b>	KYMXC.998GEJ	<b>Model Year</b>	2019
<b>Transmission (e.g. M5, A3, etc.)</b>	M6		
<b>Vehicle Emission Compliance Information (VECI) Label Type</b>	California Sales w/ California Label		
<b>Fuel System</b>			
<b>Emission Control System (model / rating specific)</b>	1	<b>Projected Sales (CBI) - CA Only</b>	
<b>Projected Sales (CBI) - US Total (includes CA Sales)</b>		<b>Projected Sales (CBI) - US (49-States)</b>	
<b>Mfr Previously Exempted?</b>	--		
<b>Permeation Family Name (s)</b>	KYMXPMETALF5		
<b>Applicant Notes</b>			
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<b>Model #5</b>			
<b>Reference Model Number</b>	5	<b>Final Assembly Manufacturer Name</b>	Yamaha Motor Co., Ltd.
<b>Manufacturer Model Name</b>	YZF-R1M	<b>Commercial / Advertised Model Name</b>	YZFR1MK (YZF-R1M)
<b>Engine Code</b>	N527	<b>Vehicle Category</b>	HMC:Class III
<b>Evaporative Family (CARB)</b>	--	<b>Number of Evaporative Canisters (CARB)</b>	1
<b>Displacement (cc)</b>	998	<b>Bore (mm)</b>	79.0
<b>Stroke (mm)</b>	50.9	<b>Basic Ignition Timing (degrees, BTDC)</b>	5
<b>Rated Power (kW)</b>	139.7	<b>RPM @ Rated Power</b>	12000
<b>Rated Torque (nt-m)</b>	112.4	<b>RPM @ Rated Torque</b>	11500
<b>N/V Ratio</b>	44.4	<b>Curb Mass (kg)</b>	206
<b>Equivalent Inertial Mass (kg)</b>	290	<b>Loaded Vehicle Mass (kg):</b>	286
<b>Transmission (e.g. M5, A3, etc.)</b>	M6		
<b>Vehicle Emission Compliance Information (VECI) Label Type</b>	49-state Sales w/ 49-state Label		
<b>Fuel System</b>			
<b>Emission Control System (model / rating specific)</b>	1	<b>Projected Sales (CBI) - CA Only</b>	
<b>Projected Sales (CBI) - US Total (includes CA Sales)</b>		<b>Projected Sales (CBI) - US (49-States)</b>	
<b>Mfr Previously Exempted?</b>	--		
<b>Permeation Family Name (s)</b>	KYMXPMETALF5		
<b>Applicant Notes</b>			
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<b>Model #6</b>			
<b>Reference Model Number</b>	6	<b>Final Assembly Manufacturer Name</b>	Yamaha Motor Co., Ltd.
<b>Manufacturer Model Name</b>	YZF-R1MC	<b>Commercial / Advertised Model Name</b>	YZFR1MKC (YZF-R1M Cal model)
<b>Engine Code</b>	N527	<b>Vehicle Category</b>	HMC:Class III
<b>Evaporative Family (CARB)</b>	KYMXU0016YDA	<b>Number of Evaporative Canisters (CARB)</b>	1
<b>Displacement (cc)</b>	998	<b>Bore (mm)</b>	79.0

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<b>Engine Family</b>	KYMXC.998GEJ	<b>Model Year</b>	2019
<b>Stroke (mm)</b>	50.9	<b>Basic Ignition Timing (degrees, BTDC)</b>	5
<b>Rated Power (kW)</b>	139.7	<b>RPM @ Rated Power</b>	12000
<b>Rated Torque (nt-m)</b>	112.4	<b>RPM @ Rated Torque</b>	11500
<b>N/V Ratio</b>	44.4	<b>Curb Mass (kg)</b>	206
<b>Equivalent Inertial Mass (kg)</b>	290	<b>Loaded Vehicle Mass (kg):</b>	286
<b>Transmission (e.g. M5, A3, etc.)</b>	M6		
<b>Vehicle Emission Compliance Information (VECI) Label Type</b>	California Sales w/ California Label		
<b>Fuel System</b>			
<b>Emission Control System (model / rating specific)</b>	1	<b>Projected Sales (CBI) - CA Only</b>	
<b>Projected Sales (CBI) - US Total (includes CA Sales)</b>		<b>Projected Sales (CBI) - US (49-States)</b>	
<b>Mfr Previously Exempted?</b>	--		
<b>Permeation Family Name (s)</b>	KYMXPMETALF5		
<b>Applicant Notes</b>			
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